

**Request to Archive  
With The National Centers for Environmental Information  
For Global GTS Upper Air BUFR from ECMWF  
Provided by ECMWF**

**2017-03-28**

This information will be used by NCEI to conduct an appraisal and make a decision on the request.

**1. Who is the primary point of contact for this request?**

Imke Durre  
NCEI  
828-271-4870  
Imke.Durre@noaa.gov

**2. Name the organization or group responsible for creating the dataset.**

ECMWF > European Centre for Medium-Range Weather Forecasts

**3. Provide an overview summarizing the scope of data you want to archive. Describe the outputs, data variables, including their measurement resolution and coverage.**

This is a dataset of high resolution upper air soundings collected by ECMWF. It will be extremely valuable in augmenting the sounding data collected over the GTS via NWS.

Metadata and for each level there is: time displacement, latitude displacement, longitude displacement, geopotential height, pressure, temperature, dew point temperature, wind speed, wind direction, level significance (flags)  
Many reports are at 2-second resolution ~3500 levels for a full ascent, some are at 1-second resolution: ~7000 levels (but we have seen up to 14500 levels).  
Some are at low resolution (standard+significant levels): O(100) levels.  
Coverage plots at <https://software.ecmwf.int/wiki/display/TCBUF/Data+availability>  
Should archive 'native' BUFR, not BUFR that has been reformatted from TEMP.

**4. What is the time period covered by the dataset? (YYYY-MM-DD, YYYY-MM or YYYY)**

From 2014-11-01  
Ongoing as continuous updates to the data record

**5. Edition or version number(s) of the dataset:**

N/A

**6. Approximate date when the dataset was or will be released to the public:**

2017-03-31

**7. Who are the expected users of the archived data? How will the archived data be used?**

These data will be used in NCEI's IGRA dataset.

**8. Has the dataset undergone user evaluation and/or an independent review process? Did NCEI participate in design reviews?**

These are the original raw observations. Their quality will be assessed as part of IGRA operations and development.

**9. Describe the dataset's relationship to other archived datasets, such as earlier versions or related source data. If this is a new version, how does it improve upon the previous version(s)?**

These are original observations.

**10. List the input datasets and ancillary information used to produce the data.**

These are original observations. They will be used in the IGRA dataset.

**11. List web pages and other links that provide information on the data.**

Paper at <http://journals.ametsoc.org/doi/abs/10.1175/BAMS-D-15-00169.1?af=R&>

for technical details see the supplemental information.

**12. List the kinds of documents, metadata and code that are available for archiving. For example, data format specifications, user guides, algorithm documentation, metadata compliant with a standard such as ISO 19115, source code, platform/instrument metadata, data/process flow diagrams, etc.**

1. See links from supplemental information [http://journals.ametsoc.org/doi/suppl/10.1175/BAMS-D-15-00169.1/suppl\\_file/10.1175\\_bams-d-15-00169.2.html](http://journals.ametsoc.org/doi/suppl/10.1175/BAMS-D-15-00169.1/suppl_file/10.1175_bams-d-15-00169.2.html)

The data archived at ECMWF uses BUFR template TM309052 (sometimes written 3 09 052) but with collecting centre reset to ECMWF and a bit of extra metadata.

This template is used for LAND and SHIP ascents. In future there will also be BUFR TEMP DROP and BUFR TEMP MOBILE reports using slightly different templates.

**13. Indicate the data file format(s).**

1. BUFR

**14. Are the data files compressed?**

No

**15. Provide details on how the files are named and how they are organized (e.g., file\_name\_pattern\_YYYYMM.tar in monthly aggregations).**

Currently in 12 hour global files, could discuss aggregation.

Files start at 09 and 21 UTC (nominal midnight ascent often launched at ~ 23 UTC).

**16. Explain how to access sample data files and/or a file listing for previewing. If it is not available now, when will it be available?**

Sample files will be provided to Imke.

**17. What is the total data volume to be submitted?**

**Historic Data: all historic data or data submitted as a completed collection.**

Total Data Volume: 250GB

Number of Data Files: 500

**Continuous Data: data volume rate for a continuous data production.**

Total Data Volume Rate: 25MB per Month

Data File Frequency: 60 per Month

Data Production Start: 2017-05-01

**18. Are later updates, revisions or replacement files anticipated? If so, explain the conditions for submitting these additional data to the archive.**

There will be ongoing updates.

**19. Describe the server that will connect to the ingest server at NCEI for submitting the data.**

Physical Location: TBD through Copernicus

System Name: TBD

System Owner: ECMWF > European Centre for Medium-Range Weather Forecasts

Additional Information:

**20. What are the possible methods for submitting the data to NCEI? Select all that apply.**

1. FTP PULL

2. FTP PUSH

**21. Identify how you would like NCEI to distribute the data. Web access support depends on the resources available for the dataset.**

**22. Will there be any distribution, usage, or other restrictions that apply to the data in the archive?**

No known constraints apply to the data.

**23. Discuss the rationale for archiving the dataset and the anticipated benefits. Mention any risks associated with not archiving the dataset at NCEI.**

As mentioned previously, these are essential for augmenting other sources of high resolution sounding data.

**24. Are the data archived at another facility or are there plans to do so? Please explain.**

No

**25. Is there an existing agreement or requirement driving this request to archive? Have you already contacted someone at NCEI?**

This activity is supported through our Copernicus partnership with ECMWF.

**26. Do you have a data management plan for your data?**

Will be managed along with other sources for IGRA.

**27. Have funds been allocated to archive the data at NCEI?**

NCEI base funds.

**28. Identify the affiliated research project, its sponsor, and any project/grant ID as applicable.**

IGRA.

**29. Is there a desired deadline for NCEI to archive and provide access to the data?**

Archive by: 2017-05-01

Accessible by:

**30. Add any other pertinent information for this request.**

None

